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Hanley, Flight & Zimmerman, LLC (Nielsen)
150 S. Wacker Dr. Suite 2200
Chicago, IL 60606

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| SKIBINSKY, ANNA | |

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ANANTHA PRADEEP, ROBERT T. KNIGHT, and RAMACHANDRAN GURUMOORTHY

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Appeal 2017-004109
Application 12/608,685[1]
Technology Center 1600

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Before DEMETRA J. MILLS, FRANCISCO C. PRATS, and ELIZABETH A. LAVIER, *Administrative Patent Judges*.

MILLS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134. The Examiner has rejected the claims as directed to non-statutory subject matter. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

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[1] According to Appellants, the real party in interest is The Nielsen Company (US), LLC. App. Br. 2.

## NATURE OF THE INVENTION

According to the Specification, p. 1, the "present disclosure relates to using neuro-response data to generate ratings predictions." "The present application discloses that ratings for previously presented media are used to predict ratings for other media based on the neuro-response data. *See id.* []¶¶[0079], [0082]." App. Br. 11.

> Conventional systems for performing ratings predictions of media materials such as programming and advertising are limited. Some ratings predictions can be made based on survey and focus group based feedback. However, conventional systems for predicting ratings are subject to syntactic, metaphorical, cultural, and interpretive errors that prevent accurate and repeatable predictions. . . . Consequently, it is desirable to provide improved methods and apparatus for generating ratings predictions by using neuro-response data such as central nervous system, autonomic nervous system, and effector system measurements.

Spec. [0002]-[0003].

The following claim is representative.

> 21. A method of transforming neuro-response data into ratings predictions, the method comprising:
>
> identifying, by executing an instruction with a processor, first neuro-response data including multiple simultaneously occurring neurological activities collected from a first subject exposed to first media via multiple channels, the first neuro-response data exhibiting a first neuro-response pattern;
>
> identifying, by executing an instruction with the processor, second neuro-response data based on a threshold of similarity of the first neuro-response pattern to a second neuro-response pattern associated with the second neuro-response data, the second neuro-response data including multiple simultaneously occurring neurological activities collected from a second subject exposed to second media, the second media having been broadcast before a time of broadcast of the first media;
>
> identifying, by executing an instruction with the processor, a first rating associated with the second media; and

predicting, by executing an instruction with the processor, a second rating for the first media based on the first rating.

*Cited References*

| | | |
|---|---|---|
| Burton | US 2004/0193068 A1 | Sept. 30, 2004 |
| Viirre | US 2005/0043646 A1 | Feb. 24, 2005 |

*Grounds of Rejection*

Claims 21–44 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

FINDINGS OF FACT

The Examiner's findings of fact are set forth in the Final Action at pages 3–8.

PRINCIPLES OF LAW

"[T]he examiner bears the initial burden, on review of the prior art ***or on any other ground***, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant." *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (emphasis added); *see also Hyatt v. Dudas*, 492 F.3d 1365, 1369–71 (Fed. Cir. 2007) (once the examiner presents a prima facie case for unpatentability, e.g., under § 112, the burden is properly shifted to applicant).

"'Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of

scientific and technological work.'" *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Claims directed to *nothing more* than abstract ideas (such as mathematical algorithms), natural phenomena, and laws of nature are not eligible for patent protection. *Diamond v. Diehr*, 450 U.S. 175, 185 (1981); *accord* Manual of Patent Examining Procedure (MPEP) § 2106 (II) (discussing *Diehr*); *see also Parker v. Flook*, 437 U.S. 584, 592–94 (1978) (if, once the mathematical algorithm is removed from consideration, if nothing patentable remains, the claims are not patent-eligible).

In analyzing patent-eligibility questions under 35 U.S.C. § 101, the Supreme Court instructs us to "first determine whether the claims at issue are directed to a patent-ineligible concept." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). If the initial threshold is met, we then move to a second step and "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 566 U.S. at 97).

*Non-statutory subject matter § 101*

The Examiner argues that

> Claims 21-44 are rejected under 35 U.S.C. [§] 101 because the claimed invention is directed to a judicial exception (i.e.[,] a law of nature, a natural phenomenon or an abstract idea) without significantly more. Claims 21-44 are directed to identifying data which is neuro-response data and identifying or predicting a rating associated with the media that is associated with neuro-response data, which is essentially determining more data. As a whole the method

> relies on the abstract ideas of analyzing information by comparing information, categorizing, organizing and transmitting information and organizing information through mathematical correlations. The claims do not include additional elements that are sufficient to amount of significantly more than the judicial exception because it is routine and conventional to perform the acts of identifying neuro-response data from a subject. It is also routine and conventional to collect neuro[-]response data and simultaneously analyze the data in real-time, as evidenced in Burton et al. (2004/0193068, par. 0165) and Viirre et al. (2005/0043646).
>
> Other elements of the method and system include using a data collection device, a processor and analyzer to run a program for deriving data based on initial data which is a recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry. Viewed as a whole, these additional claim element(s) do not provide meaningful limitation(s) to transform the abstract idea into a patent eligible application of the abstract idea such that the claim(s) amounts to significantly more than the abstract idea itself. Therefore, the claim(s) are rejected under 35 U.S.C. [§] 101 as being directed to non-statutory subject matter.

Ans. 3–4.

Appellants contend that, "the Examiner has misapplied the law by overgeneralizing the claims and arguing that over-generalization is non-statutory instead of addressing the actual language of the claims at issue. This is unmistakable legal error." App. Br. 14. More particularly, Appellants argue that

> the Examiner has ignored the actual language of claim 21 in favor of a strawman abstraction to create an alleged abstract idea. In alleging that claim 21 can be abstracted to the concept of "comparing information, categorizing, organizing and transmitting information and organizing information through mathematical correlations," the Examiner has clearly oversimplified the claim language. The Federal Circuit cautioned against such blatant oversimplification of claim

> language in *Enfish, LLC v. Microsoft Corp.*, No. 15-1244, slip op. at 14 (Fed. Cir., May 12, 2016), stating that "describing claims at such a high level of abstraction and untethered from language of the claims all but ensures that the exceptions to § 101 swallow the rule." (Emphasis added). As noted above, the USPTO recognized the importance of the Federal Circuit's guidance in *Enfish* in the *May 19, 2016, Memorandum.*

App. Br. 16. Appellants further argue that

> [N]either the *2015 Update* nor the 2016 Memorandums ignore the actual language of the claim in favor of an overgeneralization of the claim, but looks at the claim as a whole. The *2015 Update* drives this point home further in Example 27 where it is pointed out that "there is no apparent exception recited in the [following example] claim":

> 15. A method for loading BIOS into a local computer system which has a system processor and volatile memory and non-volatile memory, the method comprising the steps of:
>
> (a) responding to powering up of the local computer system by **requesting from a memory location** remote from the local computer
>
> system the transfer to and storage in the volatile memory if the local computer system of BIOS configured for effective use of the local computer system,
>
> (b) **transferring and storing** such BIOS, and
>
> (c) **transferring** control of the local computer system to such BIOS.

*Id.* (emphasis added). Significantly, the *2015 Update* does not overgeneralize this claim into "requesting, transferring and storing." Such an approach would be error as it would ignore the actual language of the claim as a whole. Instead, it states "there is no apparent exception recited in the claim," and that "even if the claim did recite a judicial exception, the claim is not attempting to tie up any such exception so that others cannot practice it."

App. Br. 18–19.

The Examiner responds, arguing that

> With regard to the citation of BIOS, Example 27, Examiner agrees that the claim in the BIOS court decision does not recite a judicial exception. In contrast, [Appellants'] claims recite data analysis steps that can be carried out as mental steps while looking at the collected neuro-response data. These steps at least include identifying neuro-response data having a pattern, identifying neuro-response data based on a threshold of similarity, identifying a first rating associated a media and predicting a second rating. Given the neuro-response data, the limitations of the claims can be carried out as mental steps or with the aid of paper/pen.
>
> With regard to [Appellants'] arguments that the claims can still amount to significantly more when considered with the other elements of the claims and as an ordered combination, it is noted that the "additional elements" have been considered. Claims 21-27, 35-40 and 41-43 are drawn to information data processing using a generic

> computer while claims 28-34 recite "additional [element]" limitations performed outside the environment of the computer including "a data collection device" to obtain neuro-response data. However, Burton et al. (2004/0193068, par. 0165) and Viirre et al. (2005/0043646) show evidence that it is routine [and] conventional to collect neuro[-]response data and even to simultaneously analyze the data in real-time.

Ans. 6–7.

ANALYSIS

We adopt the Examiner's findings of fact, reasoning on scope and content of the claims and prior art (e.g., what was well known, routine, and/or conventional in the field), and conclusions set out in the Final Action and Answer. *See* Final Action 2–4; Ans. 2–8. Only those arguments made by Appellants in the Appeal Brief and properly presented in the Reply Brief have been considered in this Decision. Arguments not so presented in the Briefs are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2015); *see also Ex parte Borden*, 2010 WL 191083 at *2 (BPAI 2010) (informative) ("Any bases for asserting error, whether factual or legal, that are not raised in the principal brief are waived.").

First, we determine whether claim 1 is directed to a patent ineligible concept. We agree with the Examiner that the claims recite an abstract idea, without more. Ans. 3. We agree with the Examiner that,

> As a whole the method relies on the abstract ideas of analyzing information by comparing information, categorizing, organizing and transmitting information and organizing information through mathematical correlations. The claims do not include additional elements that are sufficient to amount of significantly more than the judicial exception because it is routine and conventional to perform the acts of identifying neuro-response data from a subject. It is also

> routine and conventional to collect neuro-response data and simultaneously analyze the data in real-time,

as evidenced in Burton and Viirre. Ans. 3–4.

Next we move to the second step delineated in *Alice Corp.* and "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 566 U.S. at 97). We do not find that the elements of claim 21, individually or 'as an ordered combination', transform the nature of the claim into a patent-eligible application. The claim 21 steps of identifying data, by executing an instruction with a processor, and manipulating data, are generic computer implementation steps, which do not transform the nature of the claim into a patent-eligible application.

We also agree with the Examiner that Example 27 of the Appendix 1 of the *July 2015 Update: Subject Matter Eligibility*, 80 Fed. Reg. 45,429 (July 30, 2015) ("*2015 Update*"), differs from the subject matter presently claimed for the reasons provided in the Answer at pages 6–7. Nor do we find that the specific computer function claim steps provide meaningful limitations to transform the abstract idea into a patent eligible application of the abstract idea such that the claims amounts to significantly more than the abstract idea itself. Ans. 4. "The case law has identified several types of limitations that frequently fail to provide an inventive concept, including illusory limitations (e.g., generic computer implementation) and contextual limitations (e.g., field of use, extra-solution activity)." *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1312 (2016).

Furthermore, the Examiner finds that it is routine in the art to collect neuro response data and simultaneously analyze the data in real-time, as evidenced in Burton and Viirre. Ans. 4. Appellants fail to address either Burton or Viirre and the conventionality of their teachings regarding collection and analysis of neuro response data. In addition, Appellants argue that the Examiner admitted in a paper dated May 5, 2015 that the solution of the claimed invention is not found in the prior art. App. Br. 26. However, a careful review of this paper indicates that the Examiner withdrew a prior art rejection over Heuter in view of Surve and Gordon.[2] Appellants do not address the relevance of Burton and Viirre either in the Brief or Reply Brief. Appellants' claims recite data analysis steps that can be carried out as mental steps when looking at the collected neuro-response data. Ans. 6.

The lack of patentable subject matter rejection is affirmed for the reasons of record.

CONCLUSION OF LAW

The cited references and facts of record support the Examiner's lack of patentable subject matter rejection is affirmed for the reasons of record. All pending, rejected claims fall.

No more time for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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[2] Final Action dated May 5, 2015, p. 5.